

REMARKS

In response to the Office Action mailed November 23, 2004, the present application has been carefully reviewed. Reconsideration of the application is respectfully requested.

**Claimed Rejections Under 35 USC §102**

*Claims 1-16 and 30-33*

Claims 1-16 and 30-33 stand rejected under 35 USC §102(e) as being anticipated by Xu (US Patent 6,715,336).

Xu was based on a US application filed February 24, 2003 (US Application 10/374,120) and thus has an effective date of February 24, 2003.

Applicant submits herewith a Declaration by the inventor Kevin R. Willett under 37 CFR §1.131 establishing conception of the subject matter of the rejected claims prior to the effective date of Xu and diligent efforts to a reduction to practice on September 25, 2003. Applicant respectfully submits the showing of facts are of such character and weight as to establish conception of the invention prior to the effective date of Xu (February 24, 2003) coupled with due diligence from prior to said date to a subsequent filing of the present application (September 25, 2003). Therefore, Applicant respectfully requests the rejections in view of Xu be withdrawn.

**Claims 17-25 and 27-33**

Claims 17-25 and 27-33 stand rejected under 35 USC §102 as being anticipated by Xu [sic] Owen. [Paper 20041118, Page 3]

Claims 17-24 recite in part “a plurality of testing terminals, each testing terminal providing a compressive load signal and a drag force signal between the corresponding media and test sample.”

The Examiner relies upon Owen to disclose “two test terminals (element 16) for force application and a central control means (element 31).”

Referring to Figure 2 of Owen, elements 16 are piezoelectric actuators which move towards and away from each other, along a single axis A-A (shown in Figure 1).

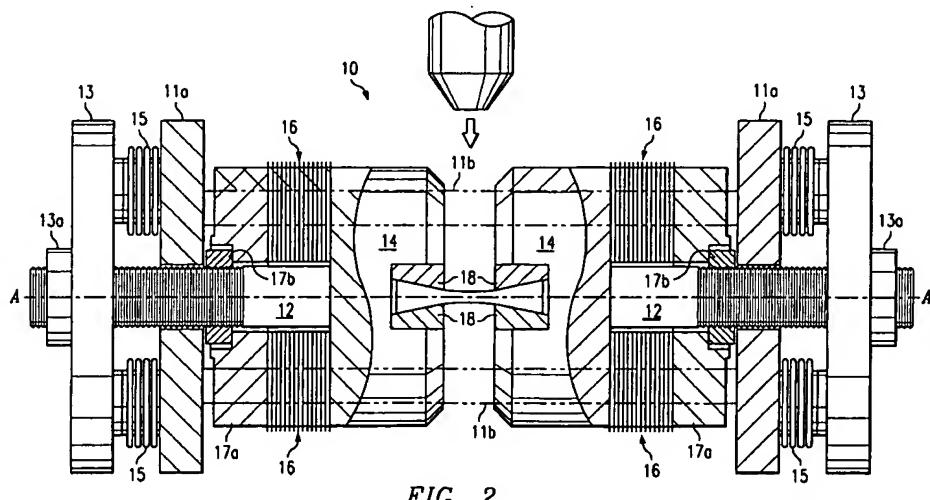


FIG. 2

The piezoelectric actuators 16 are energized by an alternating voltage to vibrate the oscillators along axis A-A, such that the oscillatory

motion is transferred to the test specimen by means of cylindrical couplers 14.

There is no disclosure of a test terminal providing a compressive load signal and a drag force signal (corresponding to movement) between the media and the test sample (held by wedges 18). The Owen test sample does not move relative to any media.

Rather, Owen measures the dynamic and static loading of a test specimen generally in the shape of a strip approximately one inch long and a half-inch wide, wherein the center of the strip is flat with a thickness of about 1/8<sup>th</sup> inch. At each end the specimen is gradually flared to a greater thickness, and each end of the test specimen is placed in a wedge grip formed by wedge retainers 18 in the face of the cylindrical coupler 14. Wedge retainers 18 hold the specimen in place under static tensile loading.

There is no disclosure of compressive load signal or a dynamic force signal between a corresponding media and a test sample.

That is, Owen does not disclose:

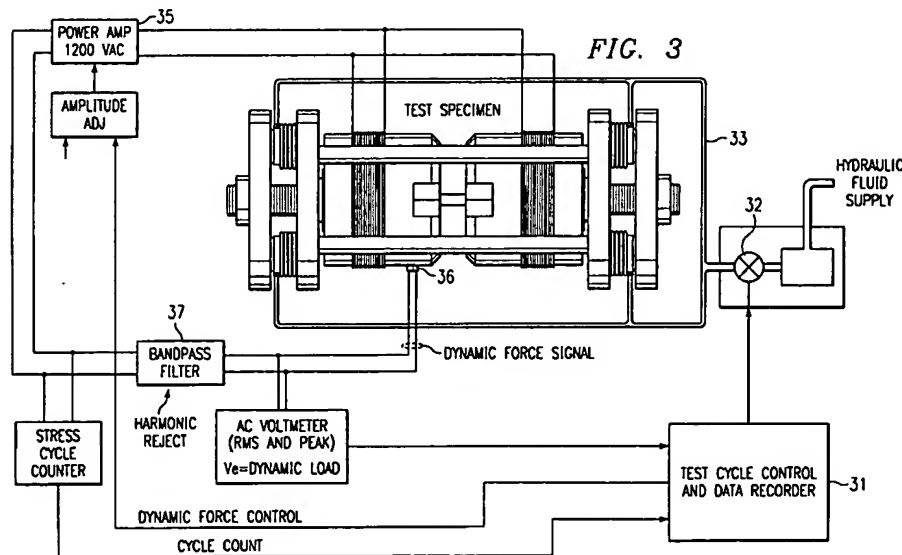
“a plurality of test terminals, each test terminal providing a compressive load signal and a drag force signal corresponding between a media and a test sample;”

“a test terminal providing a compressive load signal between a media and a test sample;”

"a test terminal providing a compressive load signal and a drag force signal between a corresponding media and a test sample;" and

"a central controller operably connected to each of the testing terminals."

The reliance of Figure 3 of Owen to disclose control system for all aspects of operation, does not disclose a plurality of testing terminals; each testing terminal providing a compressive load signal and a drag force signal between the media and the test sample.



Each of the individual piezoelectric elements 16 operating alone would not provide any relevant signal. Only if both piezoelectric elements 16 act on the same test specimen, is a load signal provided. As Figure 3 of Owen discloses only a single test station (having two

piezoelectric elements 16), there is no disclosure of the presently recited plurality of testing terminals.

The absence of at least these limitations precludes Owen from sustaining the rejection of Claim 17.

As Claims 18–24 depend from Claim 17 and include all limitations thereof, these claims are also in condition for allowance.

*Claim 25*

Independent Claim 25 recites in part, “a mounting arm connected to the drive assembly for a movement along two axis of travel. In Figure 2 of Owen, as in the remaining figures, the only direction of travel is horizontally in Figure 2. That is, the test sample is either subject to a compressive or a tensile force, and there is no motion along a second axis of travel. Further, Claim 25 recites: “each media mount having a different media mounting interface.” In contrast, the mounts (elements 18) in Figure 2 of Owen are identical and provide movement only along a single axis.

The absence of at least these limitations precludes Owen from sustaining the rejection of Claim 25.

*Claim 27*

Independent Claim 27 recites in part, “simultaneously providing reciprocating motion along a first axis between the media and the test sample at each of a plurality of testing terminals.”

As Owen only discloses a single testing terminal, this limitation is absent. The elements 16 provide a single test on the sample. Individually element 16 would not provide any signal relating to the test sample.

Claim 27 further recites in part: “exerting a controlled applied force along a second axis between the media and the test sample at each of the plurality of testing terminals.”

As Owen only discloses motion along a single axis, and does not disclose a plurality of testing terminals, nor force between the media and the test sample, at least these limitations are missing. Therefore, Claim 27 is in condition for allowance.

As Claims 28 and 29 depend from Claim 27 and include all limitations thereof, these claims are also in condition for allowance.

### *Claims 30–33*

Independent Claim 30 recites in part, “a method of determining at least one of wear and drag, a drag force between a media and a test sample ... comprising controlling each of a stroke length, stroke frequency and a loading force for reciprocating motion between the media and the test sample.”

No portion of Owen has been identified as the media with respect to the test sample. Applicant respectfully submits Owen does not

disclose a signed corresponding to one of the drag force or wear between the media and the test sample.

Owen provides a static loading and a dynamic loading, along the same axis on the test sample 18 but does not provide any interaction with a media. That is, the sample is fixed relative to the piezoelectric components of 16.

Therefore, the rejection of Claim 30 cannot be sustained.

As Claims 31–33 depend from Claim 30 and include all limitations thereof, these claims are also in condition for allowance.

Therefore, Applicant respectfully submits all the pending claims, Claims 1–33 are in condition for allowance and such action is earnestly solicited. If, however, the Examiner feels that any further issues remain, the Examiner is cordially invited to contact the undersigned so that such matters may be promptly resolved.

Respectfully submitted,



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Brian B. Shaw, Registration No. 33,782  
HARTER, SECREST & EMERY LLP

1600 Bausch & Lomb Place  
Rochester, New York 14604  
Telephone: 585-232-6500  
Fax: 585-232-2152

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